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PATENT ABSTRACTS OF JAPAN

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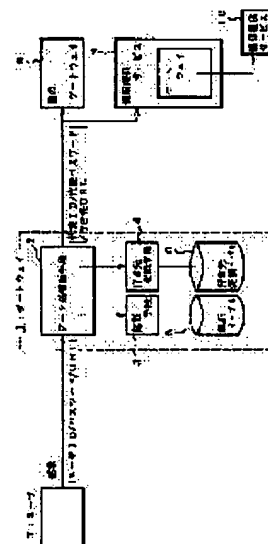
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(54) GATEWAY SYSTEM AND RECORDING MEDIUM

(57) Abstract:

PROBLEM TO BE SOLVED: To realize offering of the service of desired information by means of one user ID and a password, which are viewed from a user, by receiving a request from the user by a gateway, converting the user ID/password and transmitting them to another information supply server or another gateway.

SOLUTION: A gateway 1 transfers a request from a user 7 to another gateway 8 or an information supply server 9 or transmits returned data to the user 7 of a request source. A certification means 3 receives the request from the user 7 and checks the user ID and the password. When checking is OK, a destination conversion means 4 takes out the destination of a service destination, which is requested, and the password from a destination conversion table 6 so as to convert them. A data transmission/reception means 2 receives converted data, receives returned data in response to transmitted data. The destination conversion means 4 inversely converts the destination and returns data which are inversely converted to the user 7 of the request source.



CLAIMS

[Claim(s)]

[Claim 1] The gateway system characterized by to have the means which receives the above-mentioned service request from a user, and attests a user in the gateway system which relays the demand of the service which the alien system from a user carries out, a means to execute a service request by proxy using the link information and the authentication information corresponding to service with a demand, and the means which include the link information of the gateway system concerned in the link information of the data of the reply corresponding to a service request.

[Claim 2] The gateway system according to claim 1 characterized by hierarchizing a system with each above-mentioned means.

[Claim 3] the service which the above-mentioned user has -- it is available -- the gateway system according to claim 1 characterized by executing a service request by proxy when the table which registers that information is prepared and available service is demanded of the above-mentioned requiring agency user.

[Claim 4] The gateway system according to claim 1 characterized by preparing the table which registers the option ID which matches with the system which carries out the above-mentioned service, and serves as a total unit of accounting, and transmitting the above-mentioned option ID in the case of vicarious execution of a service request.

[Claim 5] A gateway system given in either of claim 1 to claims 4 characterized by changing into the link information of the gateway system concerned the link information in control information including the information set up into reply data when a user accesses a WWW server.

[Claim 6] The record medium which recorded the program operated as the means which receives the above-mentioned service request from a user, and attests a user, a means to execute a service request by proxy using the link information and authentication information corresponding to service with a demand, and a means which includes the link information of the gateway system concerned in the link information of the data of the reply corresponding to a service request and in which computer reading is possible.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the gateway system and record medium which relay the demand of the service which the alien system from a user carries out.

[0002]

[Description of the Prior Art] Conventionally, in intranet (network in an enterprise), the user ID used in intranet, a password, and other network user ID and passwords which were connected to the intranet concerned of a WWW server (for example, WWW server of the charge equipped with the database which accumulated large-scale information) were managed separately, respectively, and while using these properly and accessing each WWW server, accounting was performed.

[0003]

[Problem(s) to be Solved by the Invention] for this reason, inconvenient for a user, while managing independently the user ID for intranets, a password, and the user ID and the password for other WWW servers -- etc. -- there was a problem.

[0004] User ID/password is changed into other information offer server or other gateways which receive the demand from a user in the gateway and correspond in order to solve these problems, and it transmits to them, when the response is received, it transforms inversely, and it transmits to a requiring agency, and this invention aims at seeing from a user and realizing offer of service of the information on desired with one user ID and password.

[0005]

[Means for Solving the Problem] With reference to drawing 1, The means for solving a technical problem is explained. drawing 1 -- setting -- the gateway 1 transmitting the demand from a user 7 to other gateways 8 or communications services 9 etc., or transmitting to the user 7 of carrier beam data demand [return]-origin **** -- etc. -- it carries out and consists of the data transceiver means 2, the authentication means 3, a destination conversion means 4, an authentication table 5, a destination translation table 6, etc.

[0006] The data transceiver means 2 transmits and receives data. The authentication means 3 is attested with reference to the authentication table 5 about the demand from a user 7.

[0007] The destination conversion means 4 refers to the destination translation table 6, and changes and transforms a destination inversely. Next, actuation is explained.

[0008] The authentication means 3 receives the demand from a user 7, and perform the check of user ID and a password, and when a check is O.K. The destination conversion means 4 takes out and changes the destination and password of a service place with a demand from the destination translation table 6, and the data after the data transceiver means 2 changing are transmitted. He receives the data of the reply to the transmitted data, and is trying to transmit the data with which the destination conversion means 4 transformed inversely and transformed the destination inversely to the user 7 of a requiring agency.

[0009] Under the present circumstances, when not registered, or it changes when the user ID, password, and destination of a requiring agency are registered into the authentication table 5, and it urges reinput, it is made to consider as the error.

[0010] Moreover, after picking out the representation ID corresponding to a destination, and a representation password from the destination translation table 6 at the time of conversion of a destination and setting user ID as Representation ID, he is trying to change.

[0011] Moreover, when Representation ID and a representation password are received and service information is transmitted, the information on the representation ID containing the user ID of the demand origin concerned is matched with service information, and he collects it, and is trying to charge.

[0012] Moreover, it is made to carry out by combining at the time of inverse transformation about the destination in control information including the information set up into reply data when a user accesses a WWW server.

[0013] therefore, the time of changing user ID/password into other information offer server or other gateways which receive the demand from a user in the gateway 1, and correspond, transmitting to them, and receiving the response -- transforming inversely -- transmitting to a requiring agency **** -- etc. -- it becomes possible by carrying out to see from a user and to receive offer of service of the information on desired with one user ID and password.

[0014]

[Embodiment of the Invention] Next, the gestalt of operation of this invention and actuation are explained to a detail one by one using drawing 10 from drawing 1.

[0015] Drawing 1 shows system configuration drawing of this invention. It is the gateway where the gateway 1 was connected to the Internet, LAN, etc. in drawing 1. Transmit the demand which received to other gateways 8 or communications services 9 etc., or [receiving the demand from a user 7] transmitting return to the user 7 of carrier beam data demand-origin **** -- etc. -- it carries out and consists of the data transceiver means 2, the authentication means 3, a destination conversion means 4, an authentication table 5, a destination translation table 6, etc. Here, the gateway 1 may arrange arrangement between a user 7 and communications service 10, and may arrange plurality for one on a hierarchy target. A user 7 becomes possible [accessing the WWW server connected to the gateway 1 of the arbitration of the two or more floor layer, and receiving offer of desired service] by processing conversion, inverse transformation, etc. with the procedure shown in drawing 2 and drawing 3 which are mentioned later in each gateway 1, when more than one have been arranged hierarchical, without being conscious using one user ID/password.

[0016] The data transceiver means 2 receives data, or transmits data. a basis [password / in the data (demand) which received the authentication means 3 from the user 7 / the user ID and the password] -- the authentication table 5 -- referring to -- performing the check of user ID and a password, or checking a destination (authorization information) further **** -- etc. -- it carries out.

[0017] changing the destination conversion means 4 with reference to the destination translation table 6 about the destinations (the user ID, destination ID, address (URL), etc.) and password of data which were received from the user 7, or transforming inversely **** --

ID, destination ID, address (URL), etc.) and password of data which were received from the user 7, or transforming inversely **** -- etc. -- it carries out.

[0018] The authentication table 5 is matched with user ID and a password, and registers authorization information (destination ID), an organization ID, etc. beforehand (refer to (a) of drawing 4). The destination translation table 7 is matched with destination ID, and registers a destination (URL), Representation ID, a representation password, etc. beforehand.

[0019] Other gateways 8 are other gateways with the same configuration as the gateway 1. the server in which communications service 9 is a server which offers various information, and large-scale has a database -- it is -- the configuration same inside as the gateway 1 -- having -- transmitting a service request to other communications services 10 **** -- etc. -- it carries out.

[0020] Communications service 10 is a server which offers various information. Next, actuation of the whole configuration of drawing 1 is explained according to the sequence of the flow chart of drawing 2 and drawing 3.

[0021] Drawing 2 and drawing 3 show the explanation flow chart of this invention of operation. In drawing 2, S1 carries out a screen demand. This transmits the screen demand (/AAA) in which a user 7 wants to receive offer and which was chosen from the list.

[0022] S2 carries out data reception. data reception of the screen demand to which this was transmitted with the data transceiver means two S1 of the gateway 1 -- it carries out. S3 performs an authentication check. This confirms whether user ID and a password are contained in the data which three received with the authentication means S2. In the case of NG, the message which requires the input of user ID and a password (when not contained) is transmitted by S4. On the other hand, in O.K., it progresses S8 (when contained).

[0023] S5 is distinguished in the input settled of user ID. This already distinguishes user ID in an input settled to the browser by the side of a user 7. In YES, on a browser screen, since a user is input ending, he sets up user ID and a password in the control information in the case of a browser's screen demand of user ID and a password, and he already transmits in the gateway 1. On the other hand, since the user has not entered user ID and a password on a browser screen in NO of S5, a user enters user ID and a password into the predetermined region on a screen by S7, and it transmits to the gateway 1. Under the present circumstances, the following information is transmitted at least.

[0024] - User ID / password:, for example, user1/pass1 and URL, : For example, a gateway name and destination ID (/AAA) S8 receives. Under the present circumstances, the data transceiver means 2 of the gateway 1 memorizes Connection ID, and performs an exchange (for example, data transmission of S13) of subsequent data (packet) through this connection ID.

[0025] S9 checks user ID/password. This confirms whether, with reference to the authentication table 5 of (a) of drawing 4 mentioned later, the match is registered about the user ID/password in the data received by S8. In O.K., it progresses S10. An error message will be carried out, if the count of predetermined is exceeded or in NO it transmits to a user 7 as an error and urges reinput of user ID/password.

[0026] S10 checks the propriety of service utilization. This confirms whether into the authorization information on the entry which is in agreement with reference to the authentication table 5 of (a) of drawing 4 about the user ID/password of S9 (destination ID), the demanded service (for example, /AAA) is registered and the permission is granted. In O.K., it progresses S11. In NO, since it became clear that the demanded service is not registered into the authentication table 5, and is not permitted, NG is transmitted to a user 7 and the purport which is not permitted on the screen is displayed.

[0027] S11 checks destination ID. Since the service demanded by YES of S10 was registered into the column of the authorization information on the authentication table 5 of (a) of drawing 4 next, this checks the existence of the entry of applicable destination ID (authorization information) of the destination translation table 6 of (b) of drawing 4. In O.K., it progresses S12. Since it was NG of destination ID not being registered in NO, that is transmitted, and it displays on a user's 7 screen and you are told about.

[0028] S12 performs transform processing. Since this turned out to register the entry of destination ID which is O.K. of S11 and is permitted to the destination translation table 6 of (b) of drawing 4 - destination URL:, for example, www.ggg.co.jp and representation ID / representation password:, for example, a GGG+ user ID + option / passA, from the destination translation table 6 Ejection, Embedding and destination URL:, for example, www.ggg.co.jp and representation ID / representation password:, for example, GGG.user1/passA, are generated for "user1" of user ID to this.

[0029] S13 carries out data transmission. This transmits destination URL generated by S12, and the data which set up representation ID / representation password. S14 memorizes the connection ID for answering a letter in data while receiving the data with which nine was transmitted by the communications service S13 of destination URL.

[0030] S15 checks representation ID / representation password received by S14. In O.K., it progresses S16. In NO, the purport of NG is transmitted at a transmitting agency. S16 creates information. This creates information with a service request.

[0031] S17 collects accounting information. This creates and saves information required in order to charge [content / of a service request / the representation ID received by S14,] (since the user ID of the user 7 of service request origin, the organization ID of the organization which belongs, etc. are embedded in Representation ID, the total of accounting is attained for every user and every organization).

[0032] In drawing 3, S18 carries out data transmission. This transmits data (data with a service request) to the gateway 1 of a transmitting agency based on the connection ID who memorized by S14.

[0033] S19 receives the data with which one was transmitted in the gateway S18. S20 performs inverse transformation processing. This performs transform processing of S12 of drawing 2 and the inverse transformation processing of reverse which were mentioned already. As inverse transformation processing, data conversion (www.ggg.co.jp is transformed inversely like a gateway name / AAA) is carried out according to URL.

[0034] S21 carries out data transmission. This transmits data to the user 7 of a requiring agency based on the KONEN cushion ID memorized by S8. S22 receives the data with which seven was transmitted by the user S21.

[0035] S23 displays. And it returns and repeats to S1 [of drawing 2] of (A). As mentioned above, it is only that a user 7 does a data demand in the gateway 1. When the gateway 1 checks user ID / password / authorization information with reference to the authentication table 5 of (a) of drawing 4 and is set to O.K. While carrying out automatic conversion at the destination of the service provision point with reference to the destination translation table 6 of (b) of drawing 4, it changes into the representation ID which embedded user ID etc., and a representation password, and transmits to the communications services 9 and 10 of a destination. In

embedded user ID etc., and a representation password, and transmits to the communications services 9 and 10 of a destination. In communications services 9 and 10, while creating the data of offer service and answering a letter, accounting information (information, such as Representation ID and an offered service name) is collected. The carrier beam gateway 1 answers [inverse transformation / of a destination] a letter in data, data are transmitted to the user 7 of a requiring agency, and a user 7 can display data on a screen and can receive offer of service. While these enable it to receive automatically offer of the service from other communications services 9 and 10 with one user ID/password only being conscious of the gateway 1 as for a user 7, in each communications services 9 and 10, it is collecting Representation ID and service names, and it becomes possible to total accounting of the service to which user ID and a user belong and which was offered for every organization ID.

[0036] Drawing 4 shows the example of a table of this invention. (a) of drawing 4 shows the example of an authentication table. Like a graphic display, - user ID:, password:, authorization information (destination ID):, option ID:, and other: are associated (organization ID etc.), and it registers this authentication table 5. User ID is the user ID of a meaning at the user 7 of drawing 1, a password is a password of the secrecy for every user ID here, authorization information (destination ID) is information (destination ID) to which service is permitted, and Option ID is the organization ID of the meaning of the organization where a user belongs here.

[0037] While becoming possible to perform S9 of drawing 2 mentioned already by registering with the authentication table 5 as mentioned above, and the check of S10 and S11, it becomes possible to carry out registration / modification / deletion easily because an addition / modification / deletion carries out the content of registration of the authentication table 5.

[0038] (b) of drawing 4 shows the example of a destination translation table. This destination translation table 6 associates and registers - destination ID:, destination URL:, and representation ID:, for example, GGG+ user ID + option ID and representation password:, - and others like a graphic display. Destination ID corresponds to the authorization information on the authentication table 5 of (a) of drawing 4 (destination ID), destination URL is URL (address) of a destination (destination) here, Representation ID is ID in which the organization ID of the organization where user ID and a user belong was included in the part, and a representation password is a password assigned to the predetermined group containing user ID, an organization, the gateway, etc.

[0039] While becoming possible to perform a destination, conversion of a password, and inverse transformation of a destination automatically with reference to the destination translation table 6 concerned at the time of transform processing of S12 of drawing 2 mentioned already by registering with the destination translation table 6 as mentioned above, and inverse transformation processing of S20 of drawing 3, it becomes possible to carry out registration / modification / deletion easily by carrying out addition / modification / deletion to the destination translation table 6.

[0040] Drawing 5 shows the explanatory view (list selection) of this invention of operation. In advance of the screen demand of drawing 2 mentioned already of S1, a user 7 downloads the list of service provision to the gateway 1, and this explains the procedure when displaying and choosing on a screen to a detail.

[0041] (a) of drawing 5 shows a flow chart. In (a) of drawing 5, as for S21, a user 7 transmits a list request. S22 carries out list transmission. A WWW server receives the list request transmitted by S21, and this transmits a list with a demand to a user 7 (a user's 7 browser).

[0042] S23 displays in a list. This is displayed as the list transmitted by S22 is shown in (b) of drawing 5 later displayed for example, mentioned on the screen of the browser by the side of a user 7, or (c).

[0043] S24 makes list selection. A user operates a mouse out of (b) of drawing 5, or the list of (c) on a screen, and this chooses one. And it progresses to S1 of drawing 2 mentioned already.

[0044] By the above, a user 7 becomes possible [carrying out a list request to a WWW server, and choosing one from (b) of drawing 5, or the list of (c) on a screen]. (b) of drawing 5 shows Example 1 of a list (when using destination ID). It is an example of a list in the case of using destination ID like "AAA" of ** of a graphic display, and "BBB."

[0045] (c) of drawing 5 shows Example 2 of a list (when not using destination ID). It is the example which set up as follows the destination of a graphic display shown in ** instead of destination ID, respectively.

[0046] Drawing 6 shows the detail actuation explanation flow chart (the 1) of this invention. This is S9 of drawing 2 mentioned already, and the detail actuation explanation flow chart of S10. In drawing 6, S31 takes out user ID/password. This takes out user1/pass1 which the authentication means 3 indicated on right-hand side as user ID/a password out of the data received from the user 7.

[0047] S32 compares with the user ID/password of the authentication table 5. This compares the user ID/password "user1/pass1" of the entry in the authentication table 5 of (a) of drawing 4 mentioned already (for example, **).

[0048] S33 distinguishes whether it was in agreement. In the above-mentioned example, since it was in agreement, it progresses to S34. In NO, a user 7 is notified of that as NG, and the purport whose user ID / password are mistakes is displayed on a screen, and when reinput is urged or it is different between the counts of predetermined, it ends as an error.

[0049] S34 performs ejection of destination ID. Since the check of user ID/password was set to O.K. next, this takes out destination ID, for example, "AAA", out of data.

[0050] S35 compares with the authorization information (destination ID) corresponding to user1 of an authentication table. this -- S -- 31 -- S -- 32 -- S -- 33 -- YES -- O.K. -- having become -- user ID -- for example, -- " -- user -- one -- " -- corresponding -- drawing 4 -- (-- a --) -- ** -- an entry -- inside -- authorization -- information (destination ID) -- " -- AAA -- BBB -- " -- S -- 34 -- having taken out -- a destination -- ID "AAA -- " -- comparing . Here, "AAA" in agreement exists.

[0051] S36 distinguishes whether AAA is included in the authorization information on user1. Since it is contained, it means that it is set to O.K. and all user ID / the passwords / destination ID were here attested with O.K. On the other hand, in NO of S36, it is set to NG, and that of S9 is transmitted to a user 7, and it displays on a screen and you are told about.

[0052] It becomes possible to check by the above with reference to the authentication table 5 of (a) of drawing 4 mentioned already about the user ID / password / destination ID in the data received from the user 7.

[0053] Drawing 7 shows the detail actuation explanation flow chart (the 2) of this invention. This is the detail actuation explanation flow chart of S11 and S12 of drawing 2 mentioned already. In drawing 7, S41 compares destination ID of a destination translation table with /AAA. This compares whether a match is in the column of destination ID in the destination translation table 6 of (b) of

table with /AAA. This compares whether a match is in the column of destination ID in the destination translation table 6 of (b) of drawing 4 about destination ID "AAA" taken out by S34 of drawing 6. Here, it is found noting that the entry of ** is in agreement. [0054] S42 distinguishes whether /AAA is included. In YES, it progresses S43. In NO, it considers as an error as NG. S43 takes out the destination to /AAA of a destination translation table. This takes out destination URL "www.ggg.co.jp" in the entry of ** of (b) of drawing 4.

[0055] S44 takes out the representation ID format to /AAA of a destination translation table. This takes out the "GGG+ user ID + option ID" of the representation ID format in the entry of ** of (b) of drawing 4.

[0056] S45 generates representation ID. This embeds user ID "user1" into the representation ID format taken out by S44, and generates representation ID "GGG.user1."

[0057] S46 takes out the representation password to /AAA of a destination translation table. This takes out the representation password in the entry of ** of (b) of drawing 4 "passA."

[0058] S47 carries out a transmitting request. It becomes possible to generate automatically representation ID / representation password replaced with destination URL which transmits data with reference to the destination translation table 6 by the above, and user ID/password. And it becomes possible to replace destination URL / user ID / password of the original data, and to transmit with destination URL / representation ID / representation password which these-generated automatically, (changing).

[0059] Drawing 8 shows the detail actuation explanation flow chart (the 3) of this invention. This is the detail actuation explanation flow chart of S20 of drawing 3 mentioned already. In drawing 8, S51 incorporates received data (HTML).

[0060] S52 performs collating with the link information (URL) on HTML, and destination URL of a destination translation table. Collating with "www.ggg.co.jp" which is the link information (URL) taken out of the received HTML data, and destination URL of the destination translation table 6 of (b) of drawing 4 mentioned already is performed.

[0061] S53 calculates destination ID corresponding to a link information. When it becomes clear that this collated by S52, for example, was in agreement with "www.ggg.co.jp" of ** of the destination translation table 6 of (b) of drawing 4, it asks for destination ID "AAA" of the head of the entry of the ** concerned.

[0062] S54 changes received data (HTML) into a gateway name and destination ID. For example, it changes and returns to "gateway name +AAA." Destination ID which corresponds URL taken out from the received data (HTML) to a key with reference to the destination translation table 6 by the above is calculated, and after transforming inversely to gateway name + destination ID and transposing to it, it becomes possible to transmit data at the user 7 of the demand origin based on the connection ID who memorized by S8 of drawing 2. By this, a user 7 will recognize as what it was answered to data as from the gateway 1 of the demand place of data.

[0063] Next, other examples which applied the invention in this application to the so-called Cookie using drawing 9 and drawing 10 are explained to a detail below. Since Cookie (Cookie) is the function (software) in which a server makes client proper information hold in the machine of a client side, and is described into the part of * of (c) of drawing 10 later mentioned in the control information of data and destination information (destination information) is included, the destination conversion means 4 is made to perform inverse transformation here in the gateway 1 of the invention in this application mentioned already similarly. It explains to a detail below.

[0064] Drawing 9 shows the conversion procedure flow chart of the setting-out information on Cookie of this invention. In drawing 9, S61 incorporates control information of received data. S62 distinguishes whether the setting-out information on Cookie is in control information. This is Set-Cookie as shown in (a) indicated on right-hand side.; sample=12345; domain=zzzzzz.co.jp; It distinguishes whether there is any description of the setting-out information on Cookie, such as path=/. In YES, it progresses S63. In NO, it ends here.

[0065] S63 performs collating with the setting-out information on Cookie, and the destination of the destination translation table 6. S64 calculates destination ID corresponding to a domain. These [S63 and S64] take out the domain which shows the domain information shown in (b) to (c) out of ejection and this domain information from (a) of the setting-out information on Cookie incorporated by YES of S61 and S62, as indicated on right-hand side. Next, with reference to the destination translation table 6, destination ID corresponding to the domain of (c) is taken out as "FFF" here, as shown in (d).

[0066] S65 changes the setting-out information on Cookie of the control information of received data. This is replaced and changed into destination ID which drew the underline in the setting-out information on Cookie after the conversion which is destination ID of (d) for which it asked by S64, and shows the domain information which drew the underline in the setting-out information on Cookie before the conversion shown in (e) to (f) (it is equivalent to the inverse transformation mentioned already).

[0067] By the above procedure, the setting-out information on Cookie before conversion of (e) in received data will be automatically changed into the setting-out information on Cookie after conversion of (f), and it became possible to carry out together with conversion of the destination of * of (d) of drawing 10 changed by the inverse transformation mentioned already by drawing 1 thru/or drawing 8.

[0068] Drawing 10 shows other explanatory views of this invention of operation. This shows the example according to the flow chart of drawing 9 mentioned already. (a) of drawing 10 shows the example of the name of a server with which the gateway is carried. Here, it considers as the following of a graphic display.

[0069] - Server Name : (b) of www.gateway-server.co.jp drawing 10 shows the example of the content of setting out of the destination translation table 6. Here, suppose that the graphic display is set up as follows (** of (b) of drawing 4).

[0070] - Destination ID:FFF, a actual destination : (c) of www.zzzzzz.co.jp drawing 10 shows the example of received data. This shows the example of the content as which it is answered to the gateway 1 from a WWW server (WWW server which constitutes communications service 9). The part of the line of * in the control information of (a) of an upper case is the setting-out information on Cookie (the same as that of the setting-out information on Cookie of (a) of drawing 9). In addition, it is the part of the information which the part of the line of * described using drawing 8 from drawing 1.

[0071] (d) of drawing 10 shows the data after inverse transformation processing. It is data after changing with the procedure of S63 to S65 of drawing 9 mentioned already, the part of the line of * is the setting-out information after conversion of Cookie, and this is the part of the information after [which was described using drawing 8 from drawing 1 which the part of the line of * mentioned already] transforming inversely.

[0072]

[0072]

[Effect of the Invention] As explained above, according to this invention, change user ID/password into other information offer server or other gateways which receive the demand from a user 7 in the gateway 1, and correspond, and it transmits to them. Since the configuration which transforms inversely when the response is received, transmits to a requiring agency or transforms inversely the destination in control information including information when it combines at the time of inverse transformation and a user accesses a WWW server is adopted, It can see from a user and one user ID and password can receive offer of service of the information on desired. These (1) Although user ID and a password needed to be managed for every WWW server from which accounting differs whenever WWW servers differed conventionally or, it becomes possible to access without being conscious of the WWW server which performs accounting from which plurality differs by minding the gateway 1 with one user ID and password by this invention.

[0073] (2) Also about the control information (for example, setting-out information on Cookie) which set up the information that the gateway 1 was included in received data when a user accesses a WWW server, by transforming the destination in received data inversely automatically, even if it prepares the gateway of the invention in this application, it becomes possible to use control information effectively.

[0074] (3) By performing conversion/inverse transformation similarly in each gateway 1, even if it forms two or more gateways 1 of the invention in this application between a user 7 and communications service (WWW server) and makes it a layered structure, a user 1 becomes possible [accessing the WWW server of arbitration and receiving offer of desired service], without being conscious using one user ID/password.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is system configuration drawing of this invention.

[Drawing 2] It is the explanation flow chart (the 1) of this invention of operation.

[Drawing 3] It is the explanation flow chart (the 2) of this invention of operation.

[Drawing 4] It is the example of a table of this invention.

[Drawing 5] It is the explanatory view (list selection) of this invention of operation.

[Drawing 6] It is the detail actuation explanation flow chart (the 1) of this invention.

[Drawing 7] It is the detail actuation explanation flow chart (the 2) of this invention.

[Drawing 8] It is the detail actuation explanation flow chart (the 3) of this invention.

[Drawing 9] It is the conversion procedure flow chart of the setting-out information on Cookie of this invention.

[Drawing 10] They are other explanatory views of this invention of operation.

[Description of Notations]

1: Gateway

2: Data transceiver means

3: Authentication means

4: Destination conversion means

5: Authentication table

6: Destination translation table

7: User

8: Other gateways

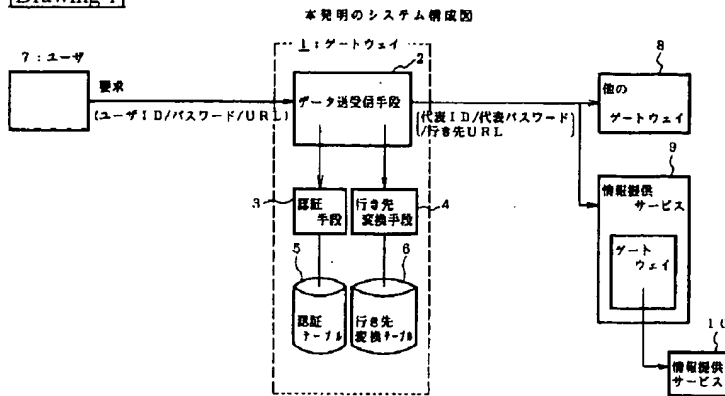
9: Communications service

10: Communications service

[Translation done.]

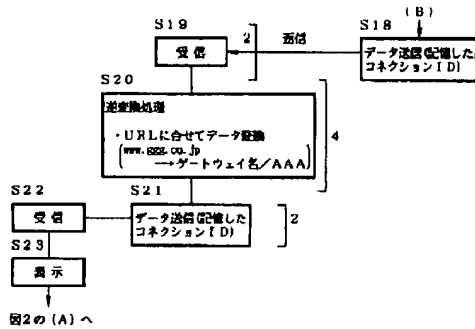
DRAWINGS

[Drawing 1]



[Drawing 3]

本発明の動作説明フローチャート (その2)



[Drawing 4]

本発明のテーブル例

(a) 認証テーブル

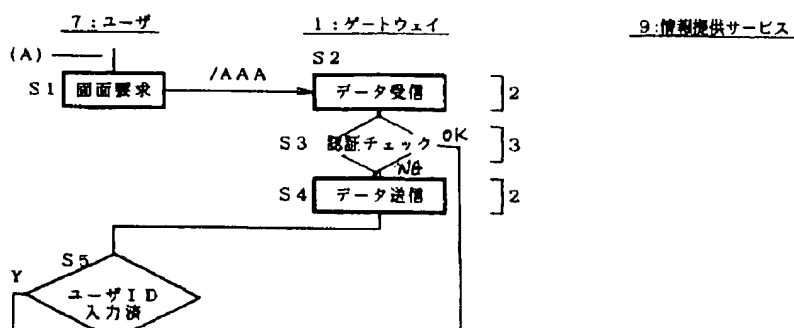
| ユーザID | パスワード | 許可情報(行き先ID) | オプションID (制限IDなど) |
|-------|-------|-------------|---------------------|
| user1 | pass1 | AAA, BBB | |
| user2 | pass2 | CCC | opt1 |
| ... | ... | ... | ... |

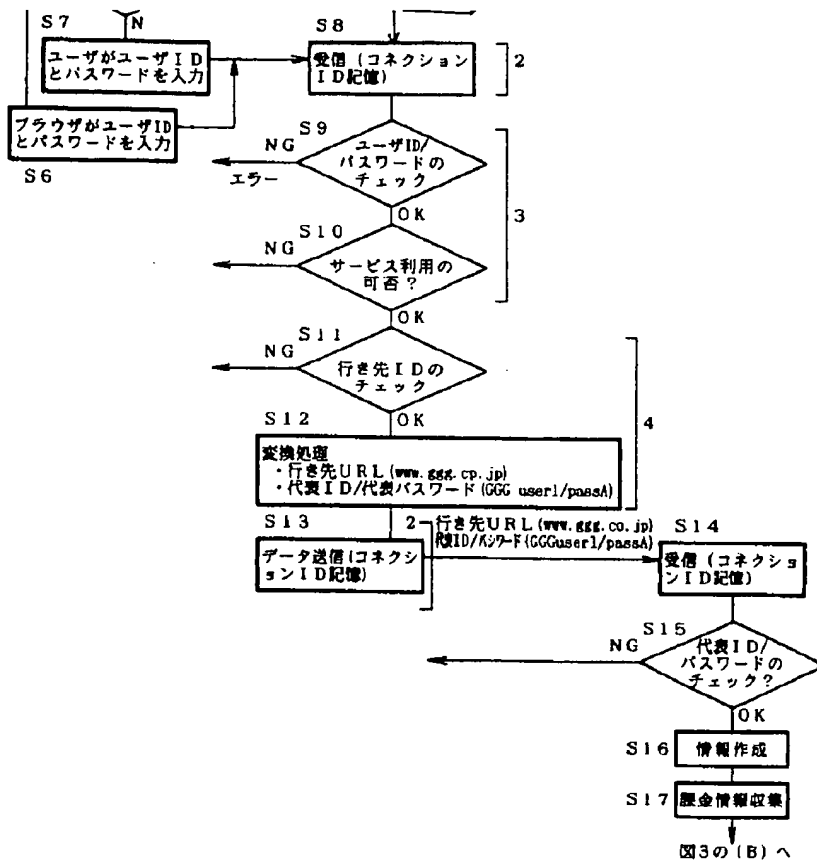
(b) 行き先変換テーブル

| 行き先ID | 行き先URL | 代表ID | 代表パスワード |
|-------|----------------|-------------------|---------|
| AAA | www.xxx.co.jp | GGG+ユーザID+オプションID | passA |
| BBB | www.yyy.co.jp | FFF+ユーザID+オプションID | passB |
| CCC | www.hhh.co.jp | HHH+ユーザID+オプションID | passC |
| FFF | www.tttt.co.jp | | |

[Drawing 2]

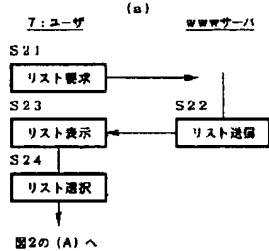
本発明の動作説明フローチャート (その1)



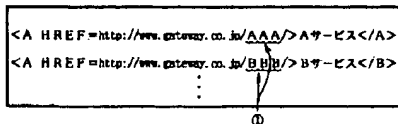


[Drawing 5]

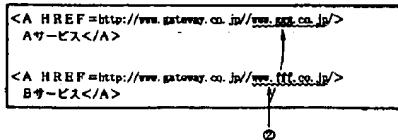
本発明の動作説明図 (リスト選択)



(b) リストの例1 (行き先IDを使う場合)

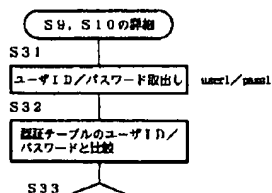


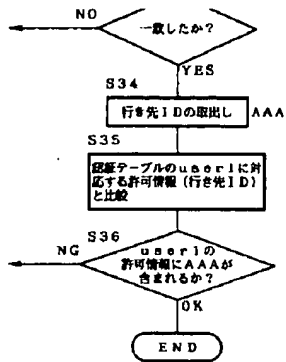
(c) リストの例2 (行き先IDを使わない場合)



[Drawing 6]

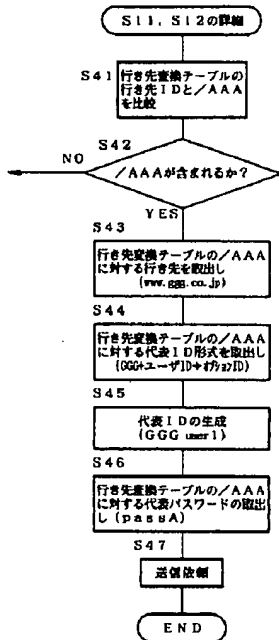
本発明の詳細動作説明フローチャート (その1)





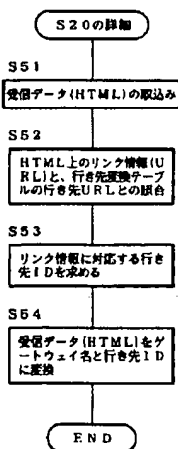
[Drawing 7]

本発明の詳細動作説明フローチャート（その2）



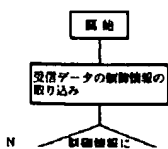
[Drawing 8]

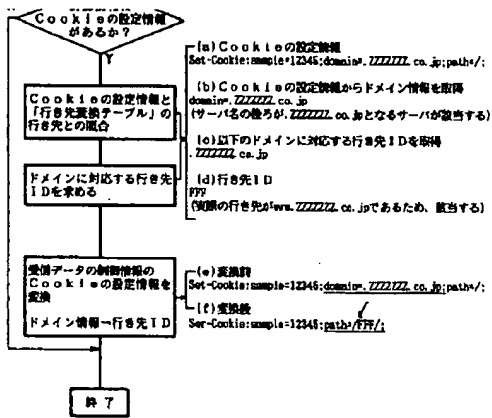
本発明の詳細動作説明フローチャート（その3）



[Drawing 9]

本発明のCookieの設定情報の登録手順フローチャート





[Drawing 10]

本発明の他の動作説明図

(a) ゲートウェイの稼働しているサーバの名称

サーバ名: www.gateway.co.jp

(b) 「行き先変換テーブル」の設定内容

行き先ID: FFF
実際の行き先: www.ZZZZZZ.co.jp

(c) 受信データ例

受信データ (WWWサーバから返送される内容)

```

HTTP/1.0 200 OK
Content-type: text/html
★Set-Cookie: sample=12345; domain= ZZZZZZ.co.jp; path=/;

<html>
<body>
★<A HREF="http://www.ZZZZZZ.co.jp/test.html">テストページ</A>
</html>
</body>
  
```

(a) 制御情報
受信データの制御情報 (この例では、ブラウザに何らかの指示をさせる部分)。
★の部分にCookieの設定情報。

(b) 変換
変換

(d) 「変換処理」後のデータ

```

HTTP/1.0 200 OK
Content-type: text/html
★Set-Cookie: sample=12345; path=/FFF/;

<html>
<body>
★<A HREF="http://www.gateway.co.jp/FFF/test.html">テストページ</A>
</html>
</body>
  
```

★の部分……「Cookieの設定情報の変換」により変換された部分。

★の部分……「URLに合わせたデータ変換」により変換された部分。

[Translation done.]